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AUTOMOTIVE

Jaguar Land Rover cuts carbon emissions with new recycling initiative

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Jaguar Land Rover upcycles aluminum to cut carbon emissions by a quarter. Image credit: Jaguar Land Rover

By LUXURY DAILY NEWS SERVICE

British automaker Jaguar Land Rover is experimenting with a new recycling process that could help curb aluminum production emissions as part of its Destination Zero mission.

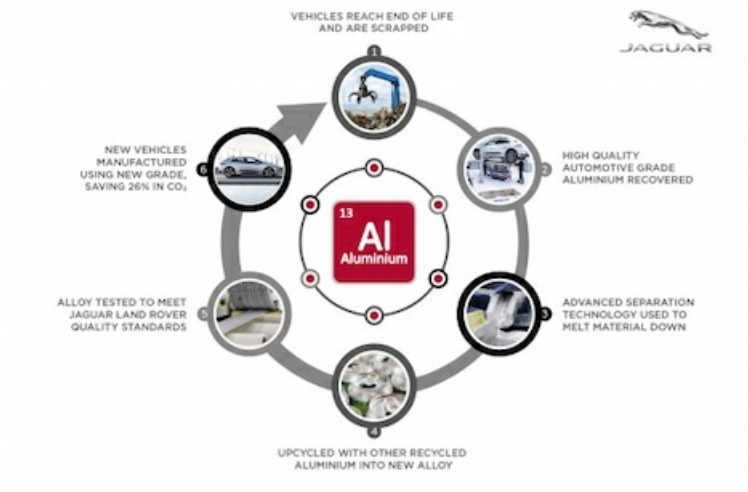
Through Destination Zero, the automaker is hoping to achieve "zero emissions, zero accidents and zero congestion" through its manufacturing and vehicles with innovative and autonomous technologies. Jaguar Land Rover's latest efforts have the potential to reduce the its reliance on raw materials.

Upcycling production

The REALITY project "upcycles" aluminum waste from drink cans, bottle tops and even end-of-life Jaguar and Land Rover models into new high-grade aluminum for new vehicles.

Although aluminum is one of the most recycled materials globally, post-consumer recycled aluminum is primarily used for everyday products and rarely for high-end applications such as car manufacturing.

According to Jaguar Land Rover, the REALITY process cuts carbon dioxide emissions by up to 26 percent, as well as reducing the amount of virgin aluminum used to manufacture new cars. The method was first tested on pre-production Jaguar I-Pace prototypes.



The REALITY project uses post-consumer recycled aluminum as part of new Jaguar Land Rover vehicles. Image credit: Jaguar Land Rover

As part of the process, older vehicles are scrape, with the aluminum melted and reformed. JLR enlisted experts from Brunel University to test the recycled aluminum for strength and purity.

"This project has allowed us, for the first time, to recover premium automotive-grade aluminum from scrapped vehicles and re-use its unique properties," said Galle Guillaume, lead project manager for REALITY at Jaguar Land Rover, in a statement. "The potential of this on the production process is a reduction in CO2 impact as well as helping us re-use even more aluminum.

"As we move into an autonomous, connected and electrified future, with the potential of shared fleets being de-commissioned en masse, it could allow Jaguar Land Rover to engineer this closed loop recycling alloy into tight production schedules to further improve efficiency and environmental benefits."

In 2016 alone, the automaker reclaimed more than 50,000 tons of aluminum scrap during the first year of XE model production. As part of Jaguar's REALCAR initiative, an aluminum recycling project, the reclaimed scraps weigh the same as 200,000 XE body shells and prevented more than 500,000 tons of CO2 from entering the atmosphere by not using new materials (see story).